Quality Control

January-04-13 2:47:10 PM Item ID: 647.7712 Accept *N900040100* Setup Start Revision ID: Item Name: Strut Tube **Start Date: Start Qty: 20.00** 1/04/13 **Cust Item ID:** Required Date: 1/18/13 Req'd Oty: 20.00 Customer: Reference: Run Approvals: Process Plan: MC5 Date: 13-01-04 Tooling: Date: Stop QC: _____ Date:____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp Draw Nbr **Revision Nbr** i 647.7700 N/C 100 0.00 St 13/01/08 20 D *100* Hardinge CNC LATHE SMALL Hardinge 0.00 Memo Hardinge CNC Lathe Small Machine as per folio FB148 FOLIO REV: N/A DWG REV: DIC Deburr 110 QC2- Inspect parts off machine FAI/FAIB 0.00 *110* 1/3/01/08 20 & 0.00 Memo

												DQA:	Date	:
NCR:	Yes	/ No					WORK ORDER NON-C	100	VFORM	MANCE / UPD/		•		
						_						QA Closed:	Date	:
Nork Ord	er:						DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part	No.			î			Rework Scrap Use-as-is		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite			l	Water Jet d. Eng. Coor. e/Packaging	Engineering Quality Other
NCR	IVO.						Work Order Update]		Large Fab	Composite		Supplier	_
Root					Desc	crip	otion of work order update	П	Initial	Actio	n	Sign &		
Cause		Date	Step	Qty			or Non-conformance	Ch	nief Eng	Descrip	tion	Date	Verification	QC Inspector
oc/Data quip/Tooling perator laterial etup ther rocess upplier raining														
				<u> </u>			F	AUL	T CATE	GORY		L		_1
Land	ing (3ear					General							
	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend						Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Inspecti Instruct Mainte	Hardware Inspection Incomplete Instructions Incomplete/Unclear Maintenance Mislabeled Misread		Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ssing :	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
				xtrusion	, †		Drawing		-	Calibration				
	Torque Waves in Extrusion Turning Sequence						Finish		Out of S	equence				

Outside Dimensions

Wave/Twist in Tube

Folio

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January-04-13 2:47:10 PM Item ID: 647.7712 Accept *N900040100* Setup Start **Revision ID:** Item Name: Strut Tube **Start Date:** 1/04/13 **Start Qty: 20.00 Cust Item ID:** Required Date: 1/18/13 Req'd Qty: 20.00 **Customer:** Reference: Run Process Plan: **Approvals:** Date:_____ Tooling: Date: Date:_____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Reject Accept Insp. **Work Center ID** Description Run Hours Code Qty **Qty** Number Stamp 120 QC8- Inspect parts - second check 0.00 *120* QC Memo 0.00 Quality Control Identify as per dwg & Stock Location://35// 130 0.00 *120* Packaging Memo 0.00 Packaging 140 QC21- Final Inspection - Work Order Release 0.00 *140* 0.00 Memo Quality Control

NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE												
										QA Closed:	Date	2:
Work Orde	er:				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	lo				Rework Scrap		1	Skid-tube Machining	Crosstube Small Fab	4	Water Jet d. Eng. Coor.	Engineering Quality
NCR N	lo			<u>_</u>	Use-as-is Work Order Update			noforming Large Fab	Finishing Composite	Rec/Stoi	re/Packaging Supplier	Other
Root				Descri	ption of work order update	Ini	itial	Ac	tion	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Chie	f Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator			ŀ							· '		
Material	_											
Setup												
Other	_			,							•	
Process												
Supplier			1									
Training												
Unapproved			1	<u> </u>		FAULT	CATE	CORY		<u></u>		
Landie	ng Gear				General	FAULI	CATE	GURT				
Latiuli	Bendin	m			Bend	Па	Grain			Ovalized	Г	Pressure/Forced
		ь Not Conce	ntric to		BOM/Route	-	lardwa	ro	<u>-</u>	Over/Under	tolerance	Temperature/Cure
		TTO COMEC	ritine to	·, ·	Broken/Damaged	\vdash		ion Incomplete	-	Part Incorre		Weld
	—	Cracks Crushed/Crimped			Burrs	-	•	ions Incomplete/	Unclear	Part Lost/Mi		Wrong Stock Pulled
'	Cuffs Crushed/Crimped,				Contamination	—		enance	-	Part Moved		
	Heat Treat				Countersink	├ ──	⁄islabe			Positioned V	Vrong	
j	Inspection Strip in Tube				Cut Too Short	\vdash	/lisreac			Power Loss/		Other
f		in Bend			Drill Holes	\blacksquare	Offset		<u> </u>	J. 21121 2300/	[1 =
			Extrusio	n	Drawing			Calibration				
	Torque Waves in Extrusion Turning Sequence				Finish	Out of Sequence						

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

Folio

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Picklist Print

January-04-13 2:47:14 PM

Work Order ID: 95252

Parent Item: 647.7712

Parent Item Name: Strut Tube

95252

647 7712

Start Date: 1/04/13

Required Date: 1/18/13

Start Qty: 20.00

Required Qty: 20.00

Comments:

IPP REV:A NEW ISSUE 12-11-06 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NR0.375		Purchased	No				f	30.5340		1.052632			
M4130NF	RN 375								**	1.217'		SI	3/01/08

Page 1

										DQA:	Date:	.
NCR: Ye	es / No				WORK ORDER NON-	COI	NFOR	MANCE / UF	PDATE	QA Closed:	Date:	
T					r		г			QA Closed.	Date.	
Work Order	:				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
					Rework	٦		Skid-tube	Crosstube	•	Water Jet	Engineering
Part No	o				Scrap		1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
					Use-as-is		Thern	Thermoforming Finishing		Rec/Sto	re/Packaging	Other
NCR No	D		· · · · · · · · · · · · · · · · · · ·		Work Order Update			Large Fab	Composite		Supplier	
Root				Descri	ption of work order update	T 1	Initial	A	ction	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Des	cription	Date	Verification	QC Inspector
Doc/Data							•					
Equip/Tooling												
Operator												
Material												
Setup												
Other												
Process												
Supplier		1										
Training												
Unapproved												
						AUL	T CATE	GORY				
Landing	g Gear				General				·			

ndi	ng Gear		General					
	Bending		Bend		Grain	Ovalized		Pressure/Forced
	Centre Not Concentric to O/S		BOM/Route		Hardware	Over/Under tolerance		Temperature/Cure
	Cracks		Broken/Damaged		Inspection Incomplete	Part Incorrect		Weld
	Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear	Part Lost/Missing		Wrong Stock Pulled
	Cuffs		Contamination		Maintenance	Part Moved		_
	Heat Treat		Countersink		Mislabeled	Positioned Wrong	·	_
	Inspection Strip in Tube	L	Cut Too Short		Misread	Power Loss/Surge		Other
	Ripples in Bend		Drill Holes		Offset			
	Torque Waves in Extrusion		Drawing		Out of Calibration			
	Turning Sequence		Finish		Out of Sequence			
	Wave/Twist in Tube		Folio	[Outside Dimensions			

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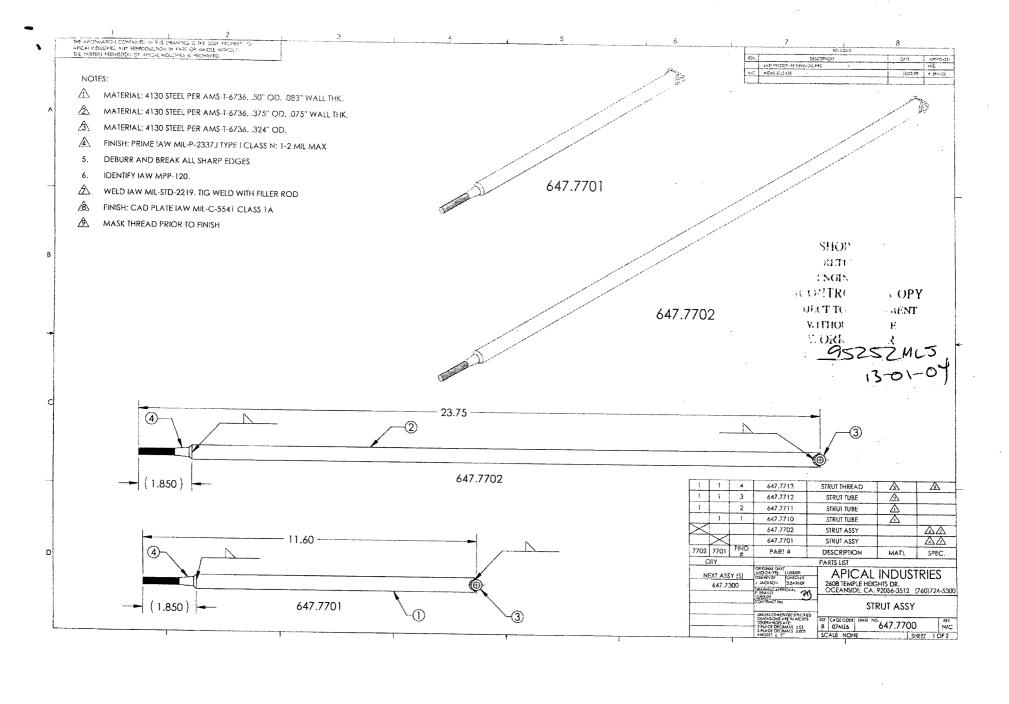
DART AEROSPACE LTD	Work Order:	95252
Description: STRUT Tube	Part Number:	647.7712
Inspection Dwg: 647,7700 Rev: N/C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
. 58	+1030	.580 .375 .278			5108	Vem
6.375 6.225	+1010	.375	0			
6.225	14+.005/001	.278			V	
·						

	1 1				
Measured by:	M	Audited by:	2	Preliminary Approval:	
Date:	13-01-08	Date:	3.1.P	Date:	

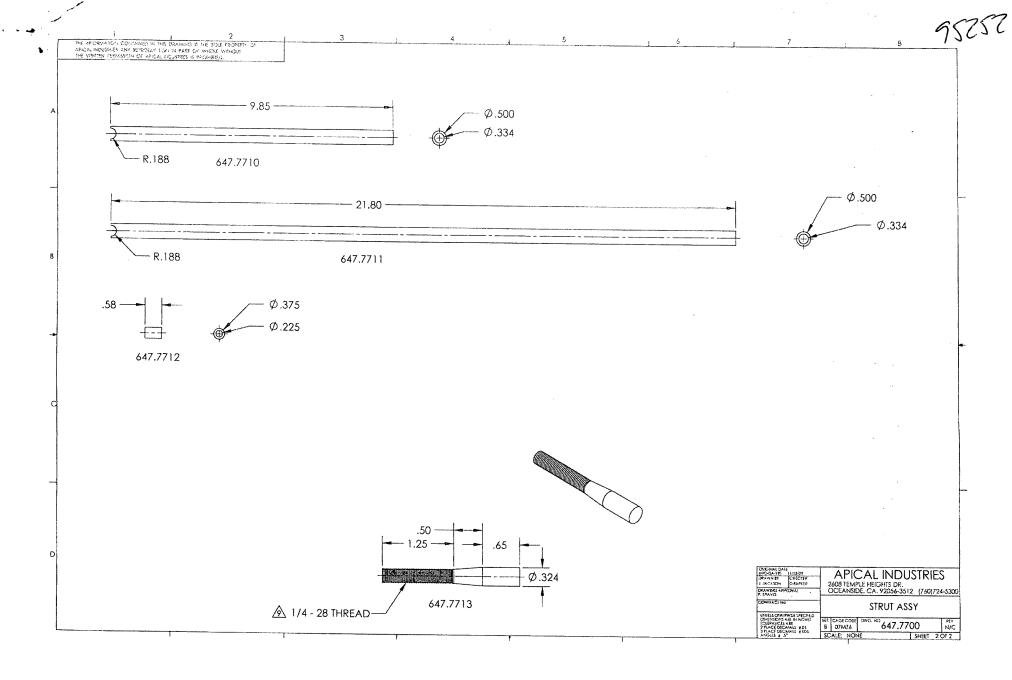
Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	



			DQA:
NCR:	Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE	
		QA C	:losed:

NCR:	es/	/ No				WORK ORDER NON-O	CONFO	DRN	1ANCE / UP	PDATE						
								QA Closed: Date:								
Work Orde	r.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS				
Part N	•					Rework Scrap		Ν	Skid-tube Aachining	Crosstube Small Fab		Water Jet d. Eng. Coor.	Engineering Quality			
NCR N	lo.					Use-as-is Work Order Update	Th		oforming Large Fab	Finishing Composite						
Root					Descri	ption of work order update	Initia	al	Ac	ction	Sign &					
Cause		Date	Step	Qty		or Non-conformance	Chief E	ng	Desc	cription	Date	Verification	QC Inspector			
oc/Data																
quip/Tooling								ł								
perator	_					ı		l								
Material	_						i									
etup	_															
)ther	_															
rocess	_															
upplier	_															
raining Inapproved																
mapproved						F	AULT CA	TFG	ORY		<u> </u>					
Landii	1g (Sear				General	AOEI CA	1120	JOK 1			**				
	_	Bending				Bend	Gra	in			Ovalized		Pressure/Forced			
		Centre No	ot Concer	tric to (_{D/S}	BOM/Route	\vdash	dwar	·e		Over/Under	tolerance	Temperature/Cure			
		Cracks				Broken/Damaged	\mathbf{H}		on Incomplete		Part Incorre) -	Weld			
			Crimped.			Burrs	$\overline{}$		ons Incomplete/	/Unclear	Part Lost/M	<u>-</u>	Wrong Stock Pulled			
	Crushed/Crimped. Cuffs					Contamination	-		nance		Part Moved	, L				
ľ	Heat Treat					Countersink	Misl	label	ed		Positioned V	Vrong				
	Inspection Strip in Tube				Cut Too Short	Misr	read			Power Loss/		Other				
		Ripples in				Drill Holes	Offs	et			-	L				
l		Torque W	aves in E	xtrusior	, [Drawing	Out	of C	alibration							
		Turning So				Finish	Out	of S	equence							
	Wave/Twist in Tube				Folio	Out	Outside Dimensions									

Date:



NCR:	Yes /	No				WORK ORDER NON-	COI	NFORM	MANCE / UPDATE					
				,							QA Closed:	Da	te:	
Work Orde	er:					DISPOSITION	_				PARTMENT	•		
Part N						Rework Scrap Use-as-is Work Order Update	l Therm	Skid-tube Crosstu Machining Small F noforming Finish Large Fab Compos	-{	Water Jet d. Eng. Coor. e/Packaging Supplier		Engineering Quality Other		
Root					Descri	ption of work order update	T	Initial	Action		Sign &			
Cause		Date	Step	Qty	•	or Non-conformance	Ct	nief Eng	Description		Date	Verificatio	n	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved														
Landi	ng Gea	r				General		LT CATE					-	·
	Be Ce Cri Cri Cu He Ins	nding ntre Not acks ushed/Cr ffs at Treat spection oples in E	imped Strip in Bend	/ Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread Offset	on Incomplete ions Incomplete/Unclear nance led * * •		Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ct ssing Vrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
f i	Torque Waves in Extrusion				า 1	Drawing	Out of Calibration							

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish Folio

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